

REMARKS

The above-identified application has been reviewed in light of the Office Action dated January 18, 2006. Claims 1 to 20 are in the application, of which claims 1, 11 and 17 are the independent claims. Claims 1, 7, 11, 17, and 20 have been amended herein. Reconsideration and further examination are respectfully requested.

In the Office Action, claims 1 to 3, 5 to 7, 9 to 13, 15 and 17 to 20 were rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 5,454,102 ("Tang"); claims 4 and 14 were rejected under 35 U.S.C. § 103(a) over Tang in view of U.S. Patent No. 6,006,233 ("Schultz"); and claims 8 and 16 were rejected under 35 U.S.C. § 103(a) over Tang in view of U.S. Patent No. 6,801,905 ("Andrei"). In response, independent claims 1, 11 and 17 have been amended to further clarify that the path information (or 'path') includes a *sequence of nodes*. Support for this newly clarified feature is found throughout the disclosure, including the paragraph beginning on line 11 of page 7 of the specification. Withdrawal of the rejections and further examination are therefore respectfully requested.

As embodied in the independent claims, the present invention generally relates to the storage of path information, in which path information including a sequence of nodes through a directed graph between a plurality of nodes, including a first node, is stored or accessed.

Referring to specific claim language, independent claim 1 recites a method, including storing data objects as nodes in a directed graph, and storing path information for a first object corresponding to a first node. The path information includes a sequence of nodes through the directed graph between the first node and a second node, where the second node is separated from the first node in the sequence of nodes by at least a third node.

Independent claim 11 recites an apparatus including a storage medium having instructions stored thereon, the instructions including a first code segment for storing data objects within a table, and a second code segment for storing a relation of a first data object to a second data object in the table, where the first data object and the second data object correspond to consecutive nodes on a directed graph. The apparatus also includes a third code segment for

storing path information associated with the first data object in the table, where the path information comprises a sequence of nodes within the directed graph that is between the first node, the second node, and a third node.

Independent claim 21 recites a system including means for accessing path information including a sequence of nodes through a directed graph between a first node and a plurality of other nodes, and means for responding to a query involving the first node, based on the path information.

The applied art is not seen to disclose, teach or suggest the features of the present invention. In particular, the applied art is not seen to disclose at least the features of *i*) storing path information (claims 1 and 11) or *ii*) accessing path information (claim 17), the path information including a *sequence of nodes* through a directed graph between a plurality of nodes, including a first node.

Tang is seen to describe a self-generating directed graph, which represents a structure and contents of structured data. *See* Tang, col. 3, ll. 45 to 50; Fig. 4; and Abstract. As shown in Figure 1, root node 1 is seen to include a list 11 of nodes contained in the root, as well as a data node building process. *See* Tang, col. 3, ll. 50 to 55. List node 20 is seen to contain a list 21 of the nodes contained in the list node, as well as process steps 22 for building additional list nodes, process steps 24 for building additional data nodes, and process steps 25 for querying structured data. *See* Tang, col. 4, ll. 4 to 10.

The Office Action alleges that column 4, lines 26 to 34 of Tang described the feature of path information providing relational information about a direct path. The cited portion of Tang, however, is merely seen to describe that data node 30 contains a pointer tag 31 to data in the structured data, where pointer tag 31 points to the location of data within the structured data. *See* Tang, col. 4, ll. 26 to 31. Nowhere is this cited text, however, seen to describe the storage of or access to a *sequence of nodes*, such as a sequence of nodes through a plurality of data nodes. Accordingly, Tang is not seen to disclose, teach or suggest at least the features of the independent claims, particularly the features of *i*) storing path information (claims 1 and 11) or

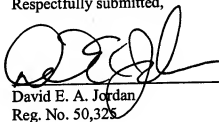
ii) accessing path information (claim 17), the path information including a *sequence of nodes* through a directed graph between a plurality of nodes, including a first node.

Based on the foregoing amendments and remarks, independent Claims 1, 11, and 17 are believed to be allowable over the applied reference. The other rejected claims in the application are each dependent from the independent claims and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to pdefine additional aspects of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance and such action is respectfully requested at the Examiner's earliest convenience.

No fees are believed due at this time. Please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,



David E. A. Jordan
Reg. No. 50,325

Date: Apr. 12, 2004

Fish & Richardson P.C.
1425 K Street, N.W.
11th Floor
Washington, DC 20005-3500
Telephone: (202) 783-5070
Facsimile: (202) 783-2331